



Japanese Saving Product Market – Recent Trend and Reinsurance

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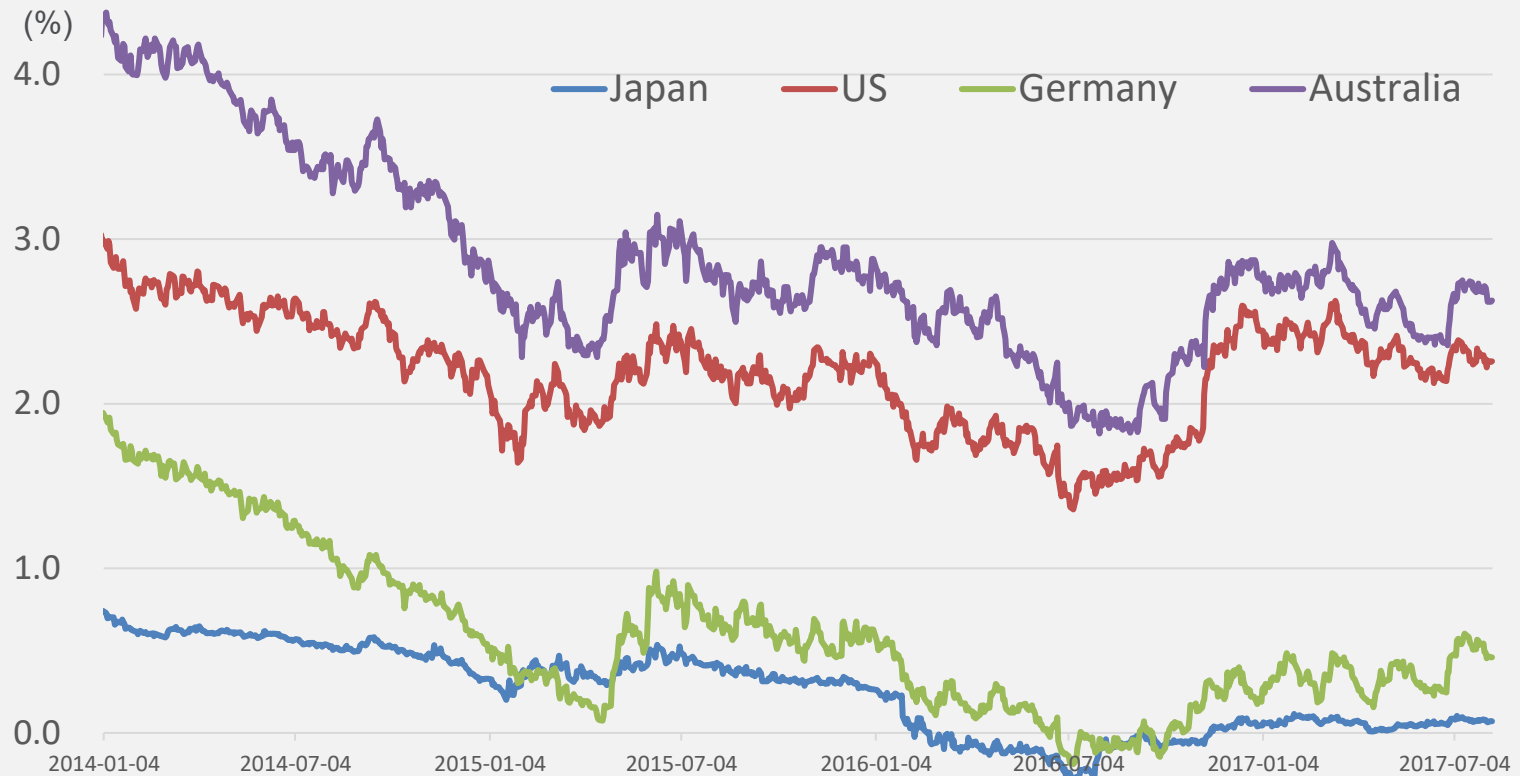
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Overview of Banc-assurance Market in Japan

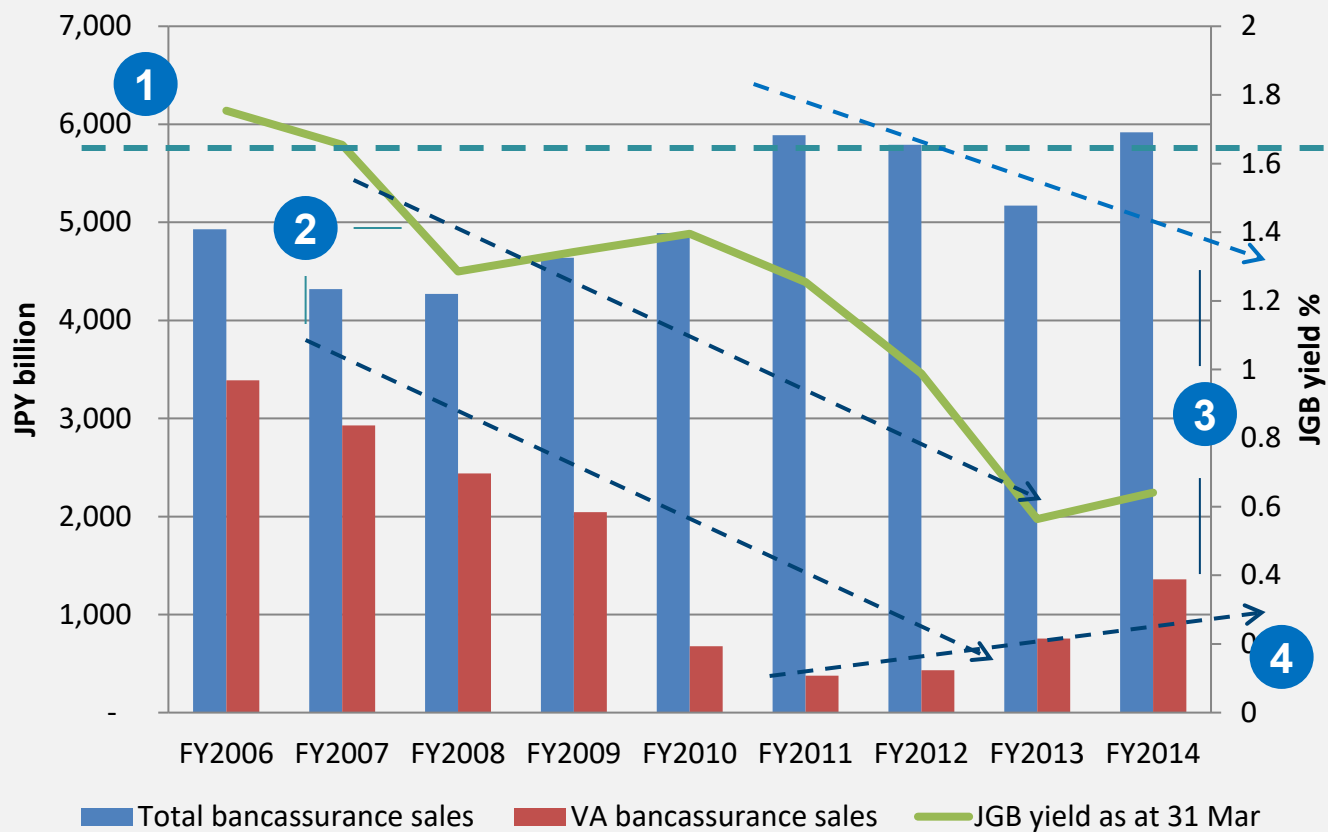


Interest Rate history Japan vs US, Germany



(1.0)

Bancassurance and Variable Annuity Sales



1. Banc-assurance sales volume is relatively stable, ~JPY5-6 trillion per year. The product mix however changed rapidly over the past few years.

2. VA guarantee cost is “mark to market” through hedge and reinsurance cost, so reacts to market (e.g. interest rate drop) quickly

3. Huge boom of SPWL from 2010 but is slowing down as pricing for traditional products is gradually catching up with the market

4. New VA product innovation and higher commission in foreign currency VA attracted banks’ attention again

Source: FSA bancassurance hearing; Company interview; own estimate

Last few years have experienced quite a big change in the Japanese banc-assurance market

BOJ Negative Interest Rate

- BOJ's negative interest policy (Jan 2016) made most of JPY saving product sales stopped and virtually no go
- No JPY SPWL

DOWN

Increase of Foreign Currency (FX) SP product

- Japanese retail investors known as famous FX investor
- Lower JPY rates made FX products sales more
- However, AUD rates have decreased, thus less attractive

UP

Newer Product Features

- Hybrid GA+SA VA
- Immediate Annuity
- Regular premium

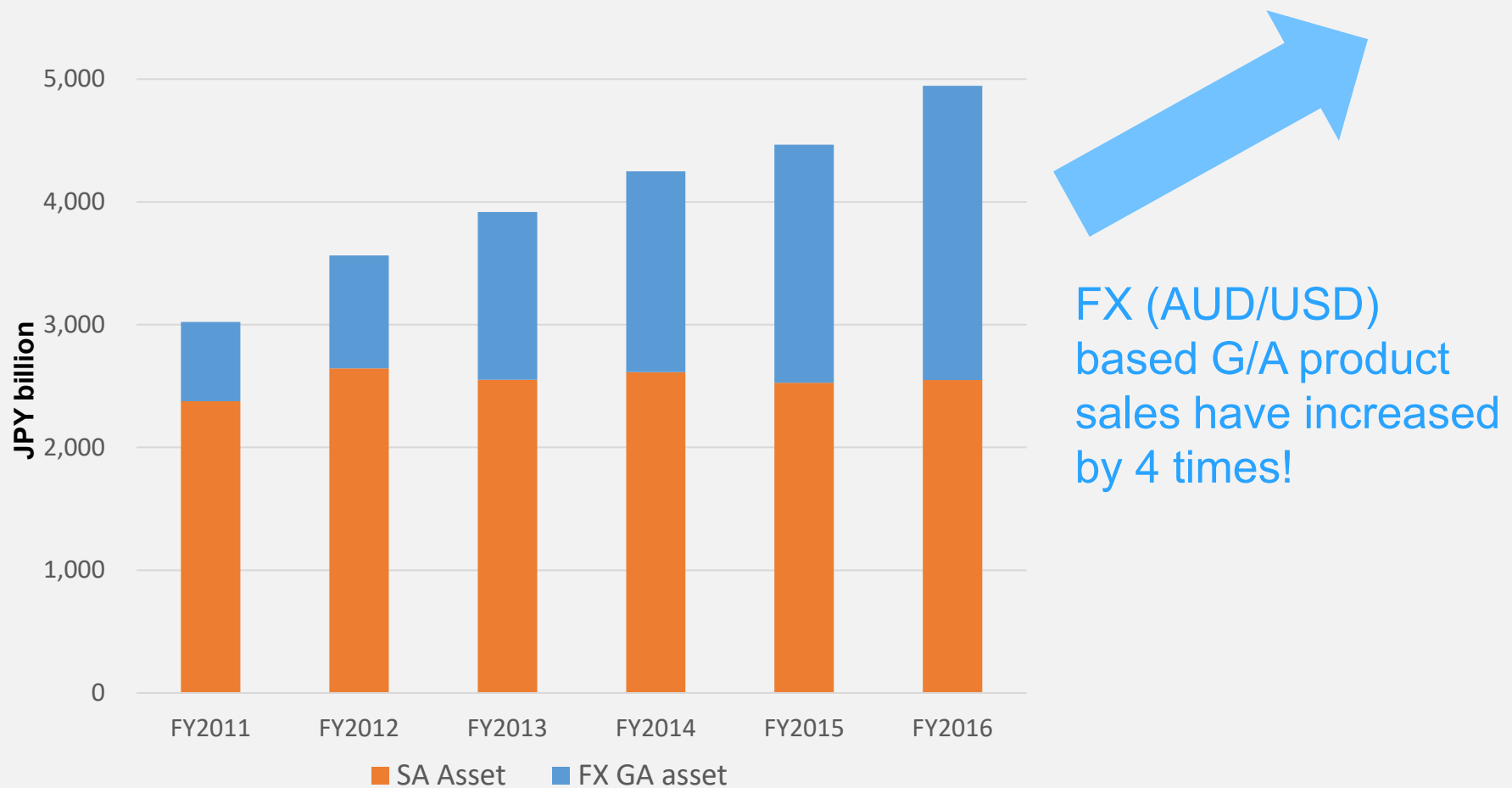
UP

Commission Discloser Regulation

- In October 2016, J-FSA introduced new rule to force banc-assurance distributors to disclose its commission level
- This so far resulted in lower sales volume for products that were paying as much as 10% of SP

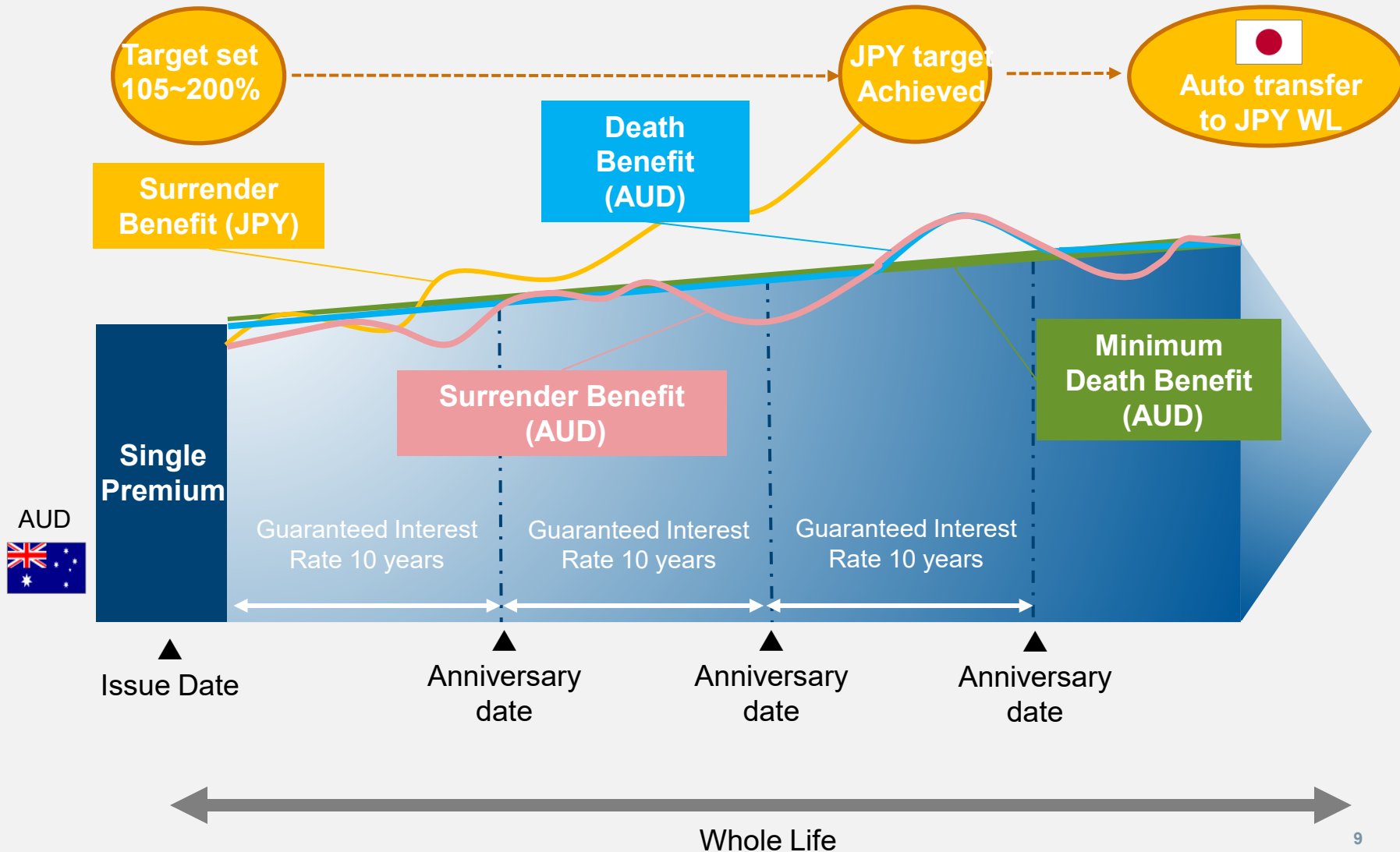
DOWN

Drastic Balance Sheet change in Banc-assurance player: MS Primary Life

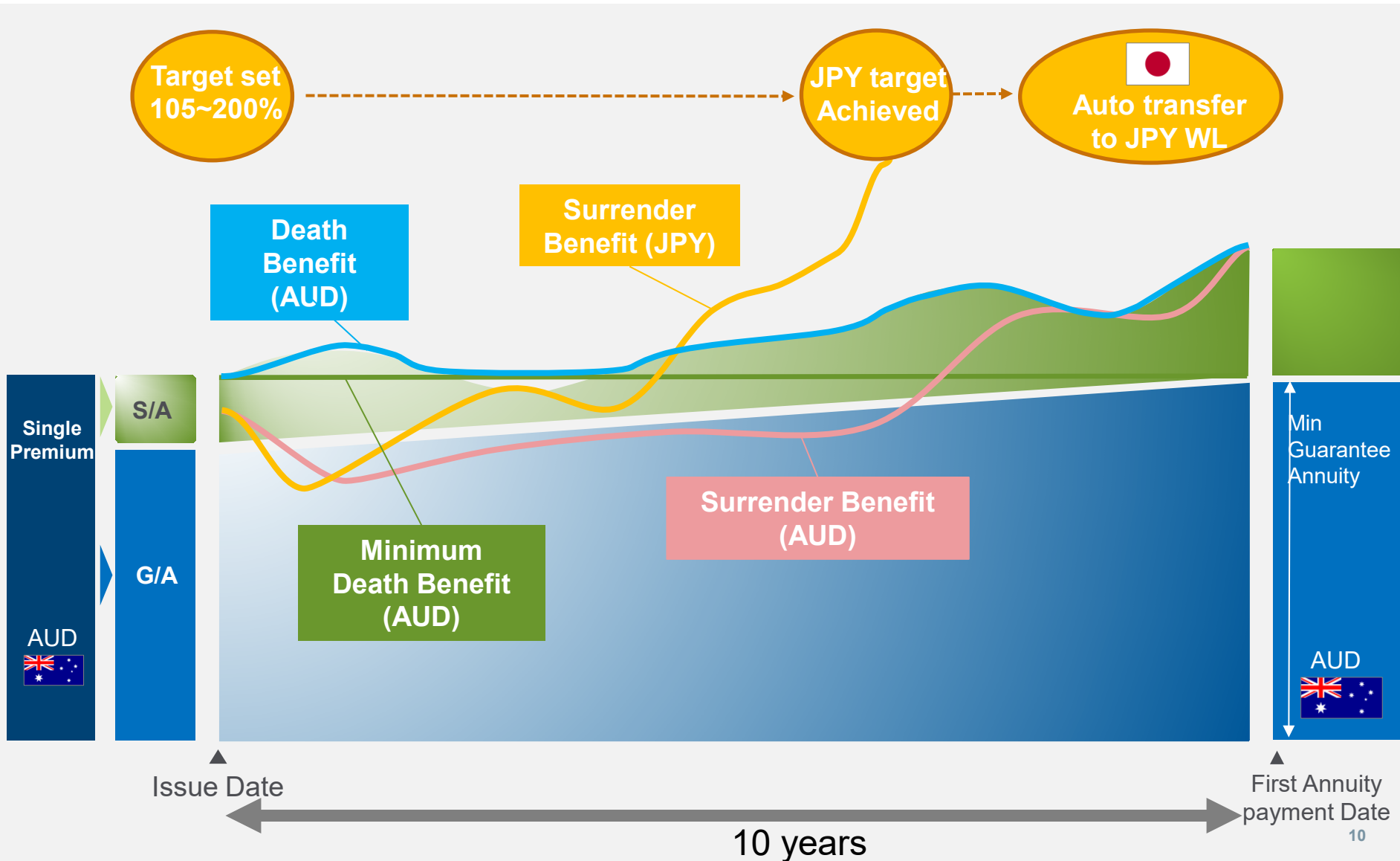


Source: MS Primary Life disclosure. Author's estimate

Product Example 1: AUD SP WL



Product Example 2: AUD Hybrid G/A+S/A VA



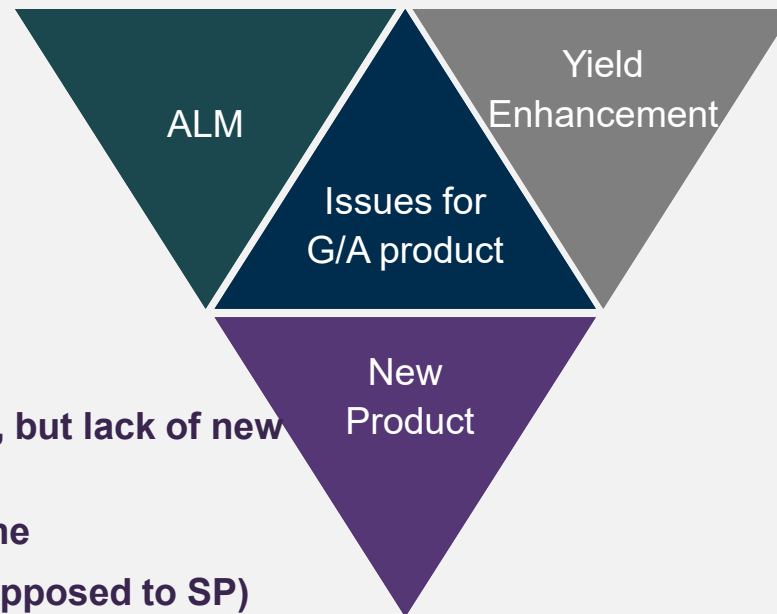
Current Issues for Lifers in Banc-assurance Market



There have been quite a few issues for lifers selling FX(AUD or USD) G/A saving products

- Liquidity is lower for long tenor (AUD)
- Accounting problem
 - ✓ MVA
 - ✓ High distribution commission
 - ✓ PnL treatment for FX AFS asset
- Future rates down risk, if regular premium

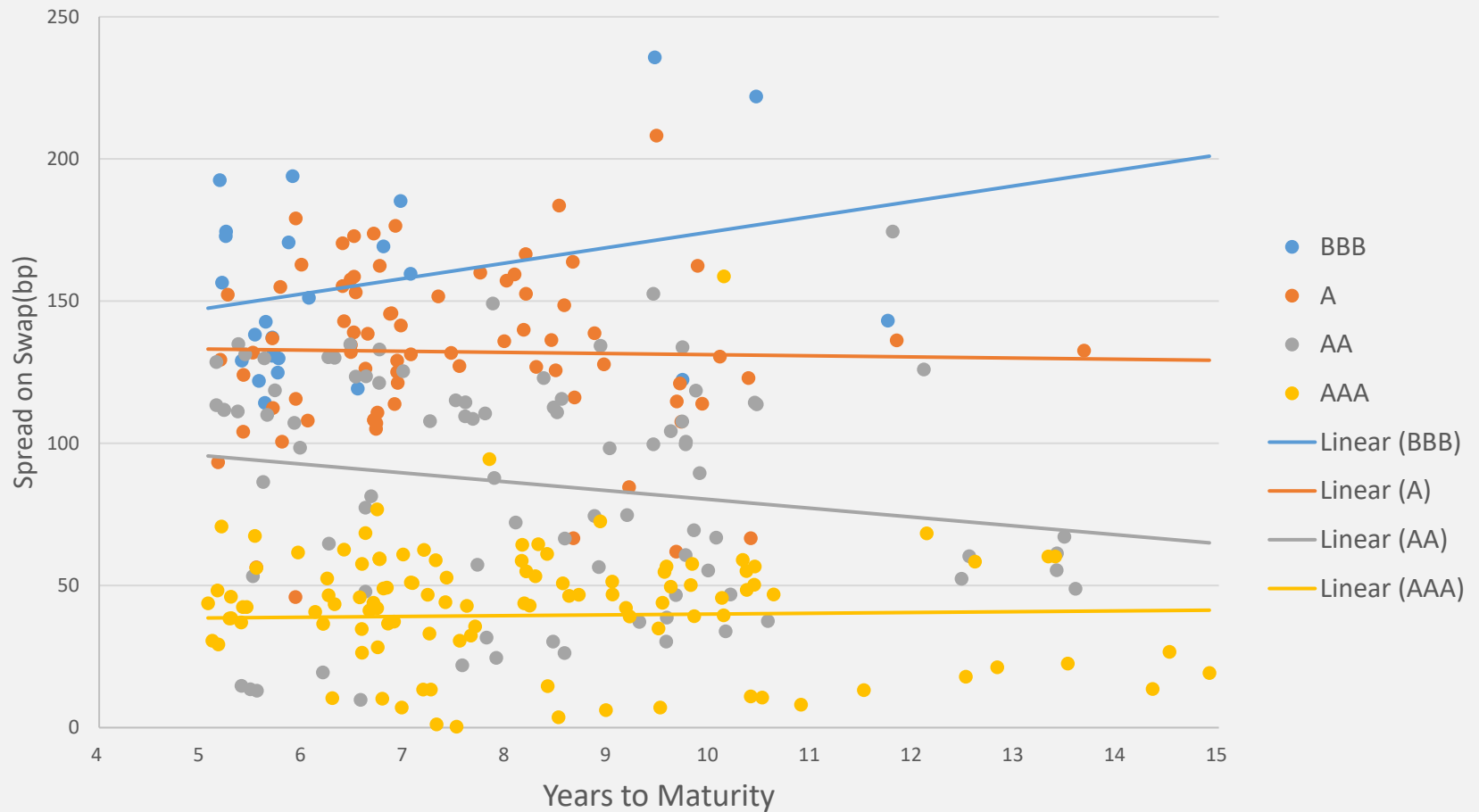
- Foreign rates have been dropping, thus became read ocean credited rate competition
- Some insurers do not have foreign credit monitoring function
- Usage of JGB+Xccy swap investment – good, but can involve accounting issue



- Demand for newer products, but lack of new idea
 - ✓ Different benefit scheme
 - ✓ Regular premium (as opposed to SP)
 - ✓ Inherit tax products

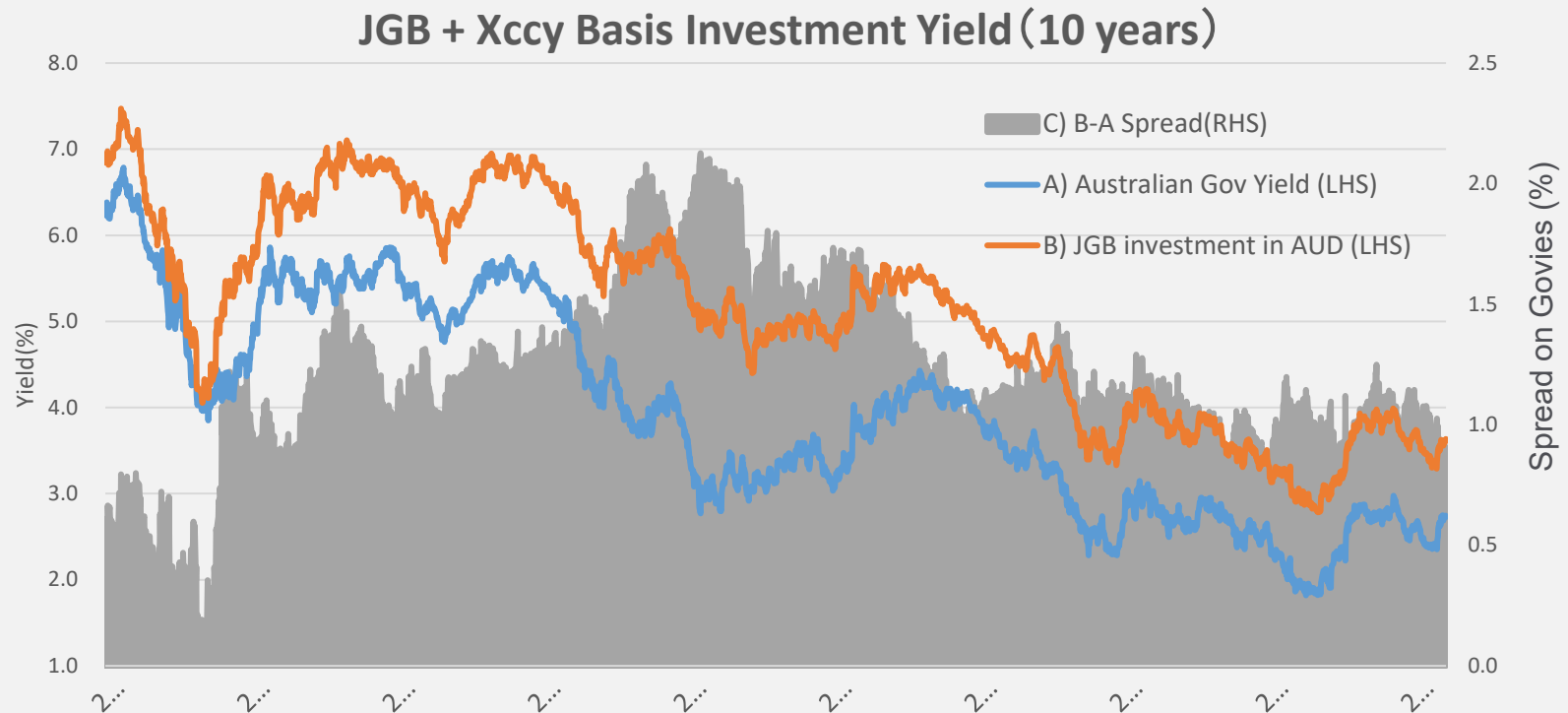
Long tenor AUD Investment Space is limited

AUD Note yield with different tenors



Source: Bloomberg, Rating is by S&P

If JGB is swapped to AUD, c.a. 100bp spread can be achieved



Source: Bloomberg. 10y Investment Yield. Simplified calculation.

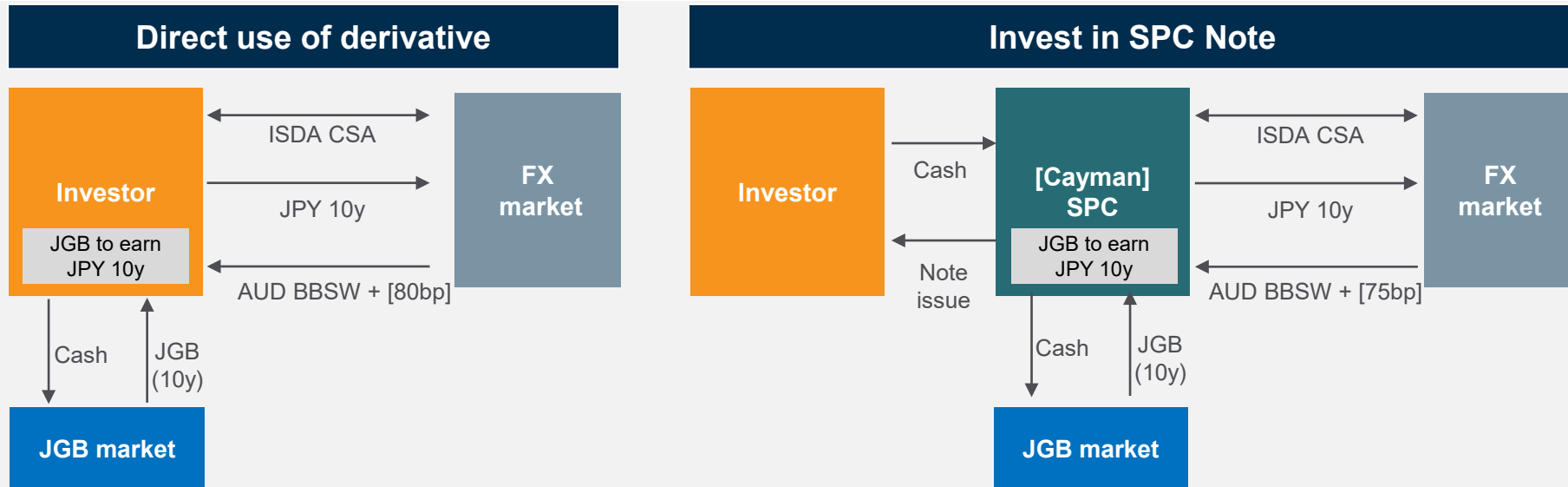
Demand-Supply factors

- Increase of Samurai bond issuance -> borrowing USD with JPY collateral -> widening
- JPY institutional investors invest in foreign bond swapped into JPY -> widening

Fundamentals factors

- Credit risk difference between JGB and UST/ACGB

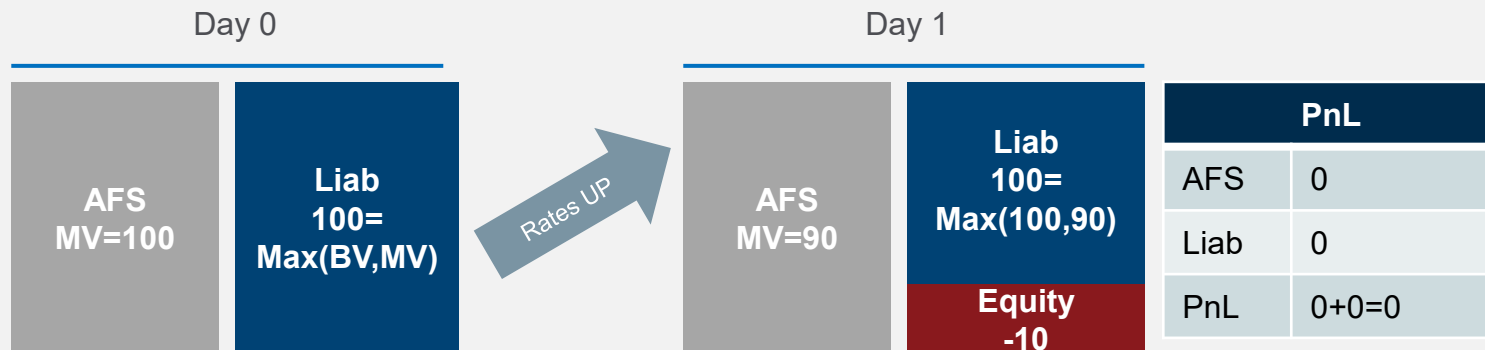
Investor can enjoy JGB+Xccy Yield by Derivative or SPC note



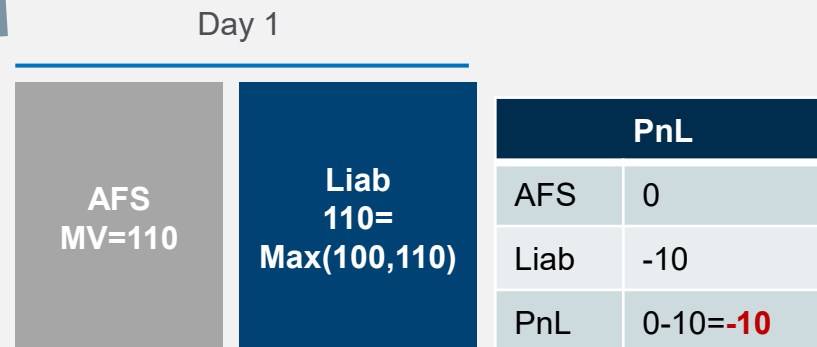
- SPC Note (JGB + Xccy embedded) can achieve JGB+Xccy yield without having accounting PnL volatility and derivative ops at investor
 - ✓ In Japan such note is usually classified as AFS
 - ✓ However, due to different reason direct derivative is sometimes preferred
 - ✓ Direct derivative could also be cheaper (but more ops burden)
- Even for SPC note, there will still be accounting Balance Sheet volatility as mtm change will go to other comprehensive income (thus Balance Sheet volatility)
- Reinsurance can be utilized to solve all the issues and achieve intended economy

- As the liability valuation for MVA product is $\text{Max}(\text{Book Value}, \text{Market Value})$, there will be inevitable accounting ALM mismatch regardless of the asset holding categories
- If the asset hold is JGB+Xccy, which is quite common, it will be another factor for a complication

Accounting ALM mismatch by Rates change (AFS Asset)



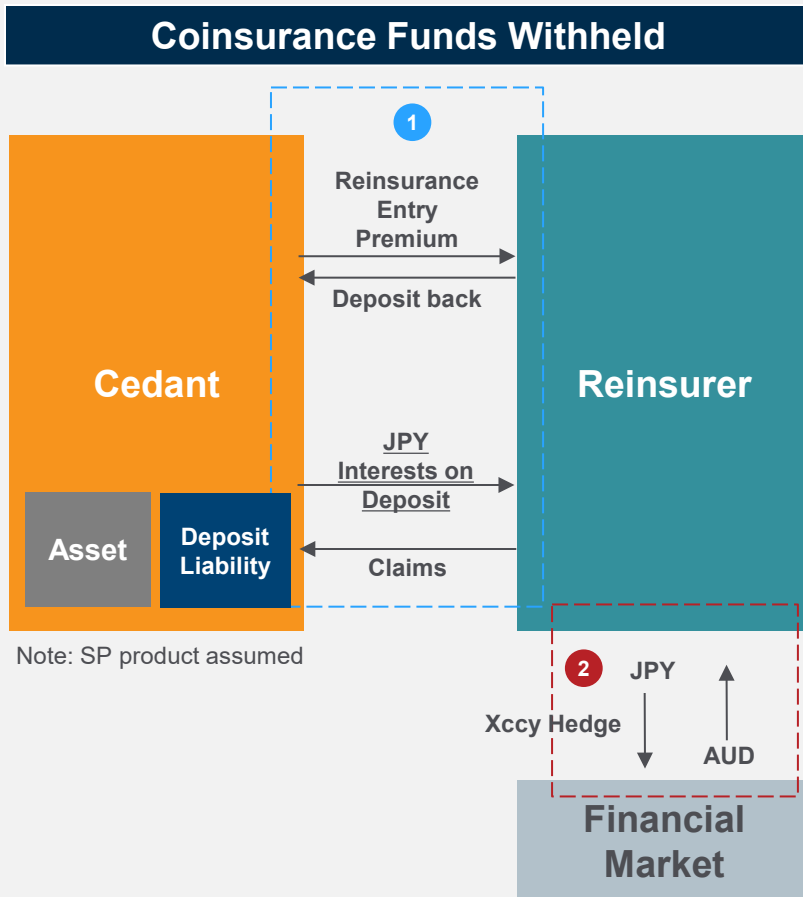
- In this case, equity is subject to rates up risk, and PnL is subject to Rates down risk
- Similar argument holds for other asset holding categories



Reinsurance Usage for Saving Product



Case 1: Xccy Swap Embedded Reinsurance (SP WL business in AUD)



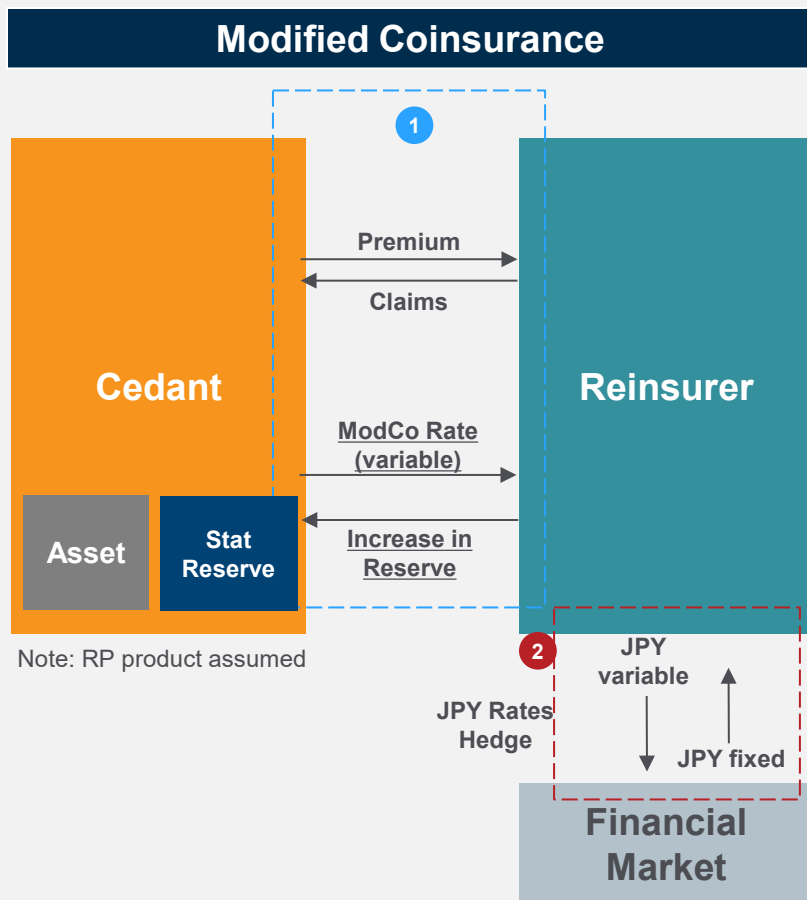
- 1 Reinsurance Treaty – Coinsurance Funds Withheld**
- Cedant enters a reinsurance with Reinsurer
 - Reinsurer receives upfront an entry premium (equal to the ceded reserves), and deposits it back to the Cedant
 - ✓ So the asset stays at Cedant
 - As time goes by,
 - ✓ Reinsurer gets **JPY interest on the deposit**
 - ✓ Reinsurer pays **the AUD claims**
 - On claim (death, surrender, maturity) payment, Reinsurer gets the deposit back, and pays the claim to the Cedant

- 2 Xccy Hedge**
- Reinsurer trades basket of interest rates, FX derivatives replicating the risk exposure under the reinsurance treaty
 - Reinsurer uses the proceeds of the hedges to pay the claims under the reinsurance treaty

■ No accounting ALM mismatch due to MVA; no more MVA reserve on Cedant Balance Sheet

■ JGB + Xccy investment economy is achieved without any accounting concern

Case 2: Rates Forward Swap Embedded Reinsurance (Regular Premium Saving in JPY)



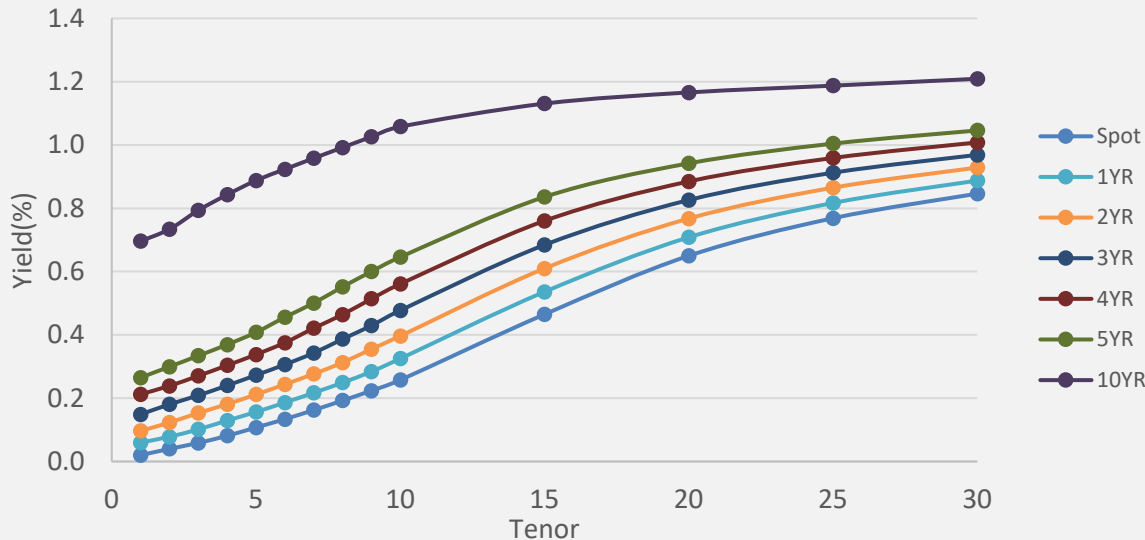
- 1 Reinsurance Treaty – ModCo**
- Cedant enters a reinsurance with Reinsurer
 - There will be no initial payment
 - ✓ So the asset stays at Cedant
 - As time goes by,
 - ✓ Reinsurer gets **JPY variable ModCo Rate** (e.g. 10y swap rate on each premium payment date)
 - ✓ Reinsurer pays **Increase in Reserve (+Claim)**
 - Thus, through the ModCo rate and Increase in Reserve, there is natural rates forward derivative position embedded in the transaction

- 2 Xccy Hedge**
- Reinsurer trades basket of interest rates derivatives replicating the interest rates exposure under the reinsurance treaty;
 - Reinsurer uses the proceeds of the hedges to pay the claims under the reinsurance treaty.

■ Forward Rates risk naturally embedded in regular premium business is hedged

■ Forward Rates “pick up” is achieved without any derivative accounting volatility

JPY Rates Forward Curve



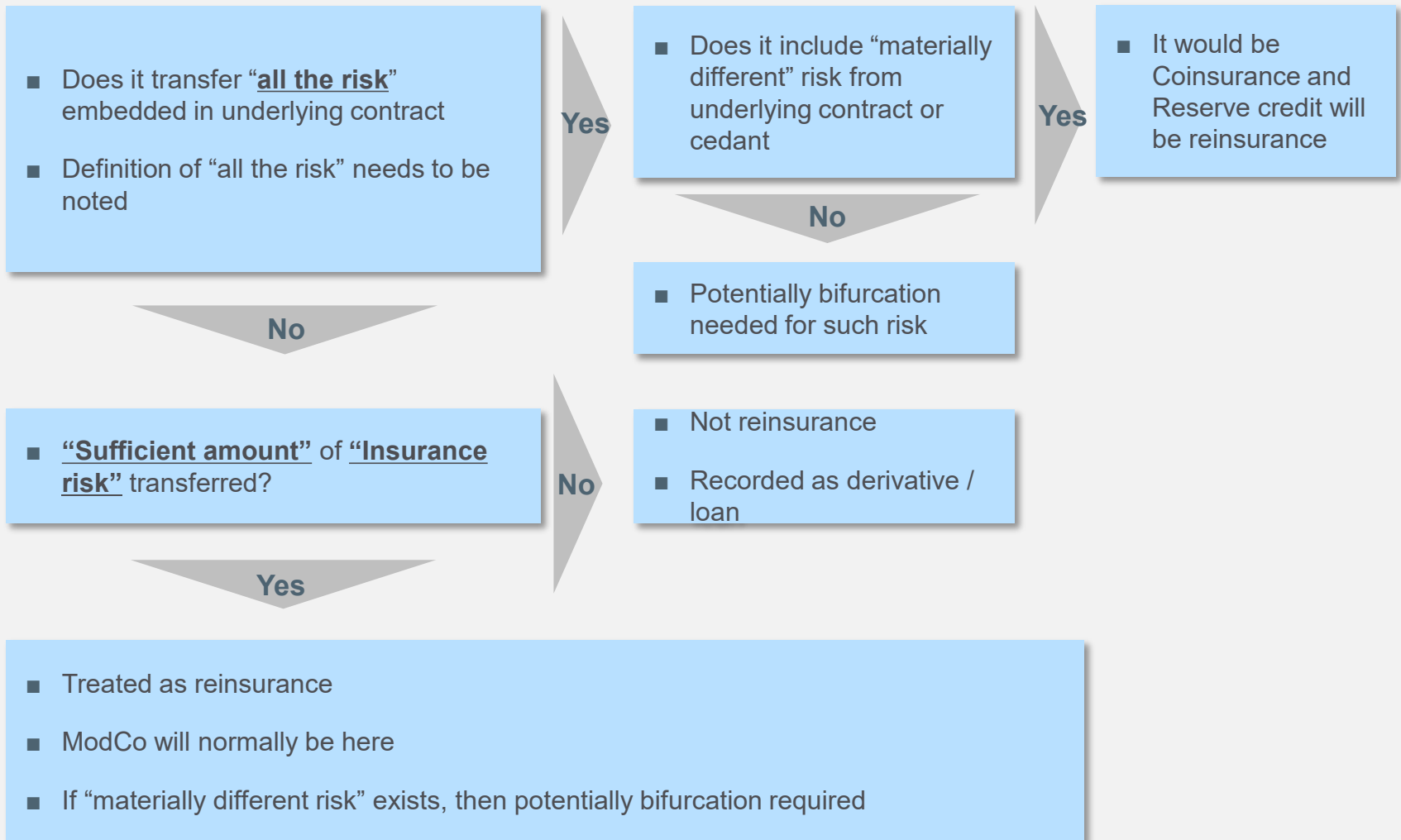
- 10y Swap rate has **39p**
“pickup“ between current and 5y
- ✓ Current 10y Rate: **26bp**
- ✓ 10y Rate in 5y: **65bp**
- This “pick up” will be realized only if yield curve turns out to be the same in 5y, but insurer will be protected by rates down risk with 39bp buffer to lose

Tenors	Spot	1YR	2YR	3YR	4YR	5YR	10YR
1y	0.02	0.06	0.10	0.15	0.21	0.27	0.70
2y	0.04	0.08	0.12	0.18	0.24	0.30	0.73
3y	0.06	0.10	0.15	0.21	0.27	0.33	0.79
4y	0.08	0.13	0.18	0.24	0.30	0.37	0.84
5y	0.11	0.16	0.21	0.27	0.34	0.41	0.89
6y	0.13	0.19	0.24	0.31	0.38	0.46	0.92
7y	0.16	0.22	0.28	0.34	0.42	0.50	0.96
8y	0.19	0.25	0.31	0.39	0.46	0.55	0.99
9y	0.22	0.28	0.36	0.43	0.51	0.60	1.03
10y	0.26	0.33	0.40	0.48	0.56	0.65	1.06
15y	0.47	0.54	0.61	0.68	0.76	0.84	1.13
20y	0.65	0.71	0.77	0.83	0.88	0.94	1.17
25y	0.77	0.82	0.87	0.91	0.96	1.00	1.19
30y	0.85	0.89	0.93	0.97	1.01	1.05	1.21

FAQ for Market Risk Reinsurance



FAQ1: Why is it a Reinsurance?

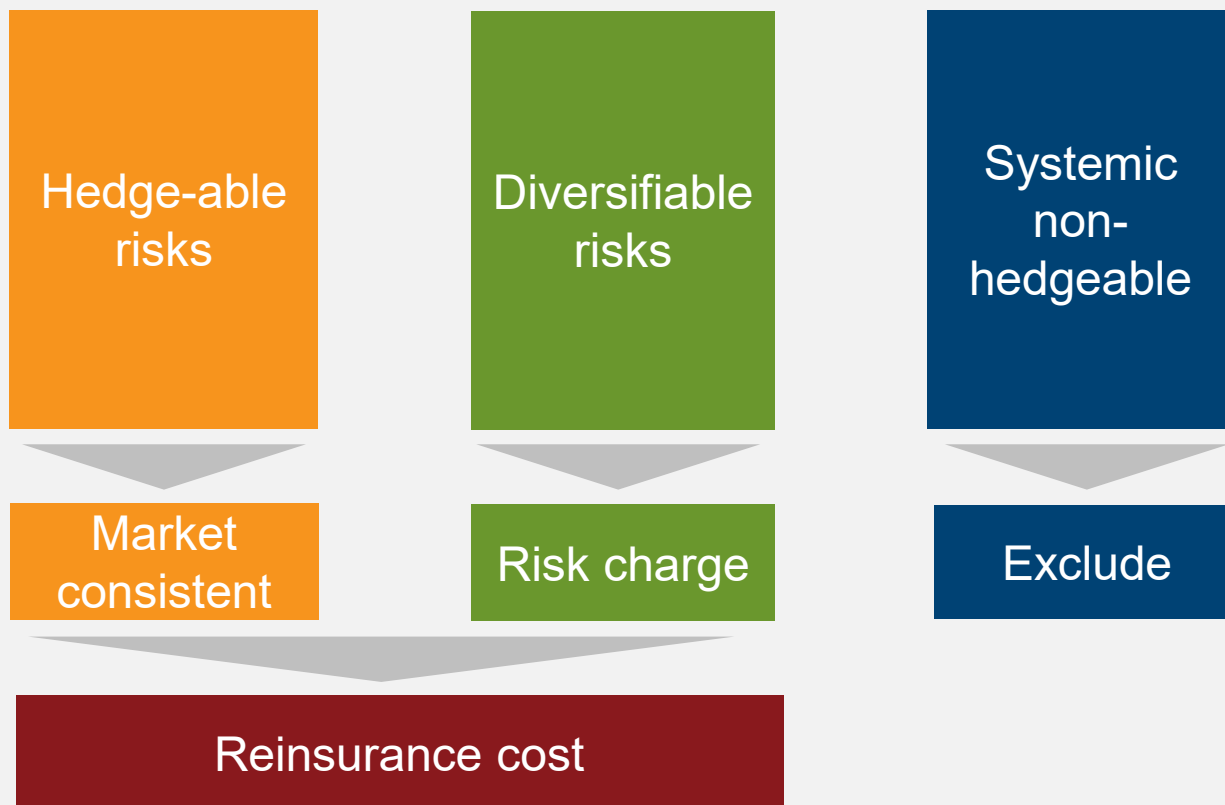


FAQ2: Why should I use reinsurance rather than derivatives

	Pros	Cons
Reinsurance	<ul style="list-style-type: none">■ Better accounting treatment if reinsurance accounting applies■ Can use insurance profit to subsidize hedge cost■ Less operational burden■ Diversification of hedge counterparty through reinsurance■ More holistic; can achieve multiple objectives at the same time	<ul style="list-style-type: none">■ Conceptually more complicated■ Scrutiny by auditors and regulators possible■ Need of transfer of insurance risks
Derivatives	<ul style="list-style-type: none">■ More freedom in choosing risks to take or hedge	<ul style="list-style-type: none">■ Hedge accounting not easy or even not possible■ Heavy operational and compliance burden for running derivatives

FAQ3: Is reinsurance more expensive than derivatives?

- No, definitely not
- If reinsurer uses derivatives for hedging, the cost of production for this part is fully market consistent
- Insurance risk transfer has a cost but reinsurer can be a more efficient risk taker due to global diversification for example

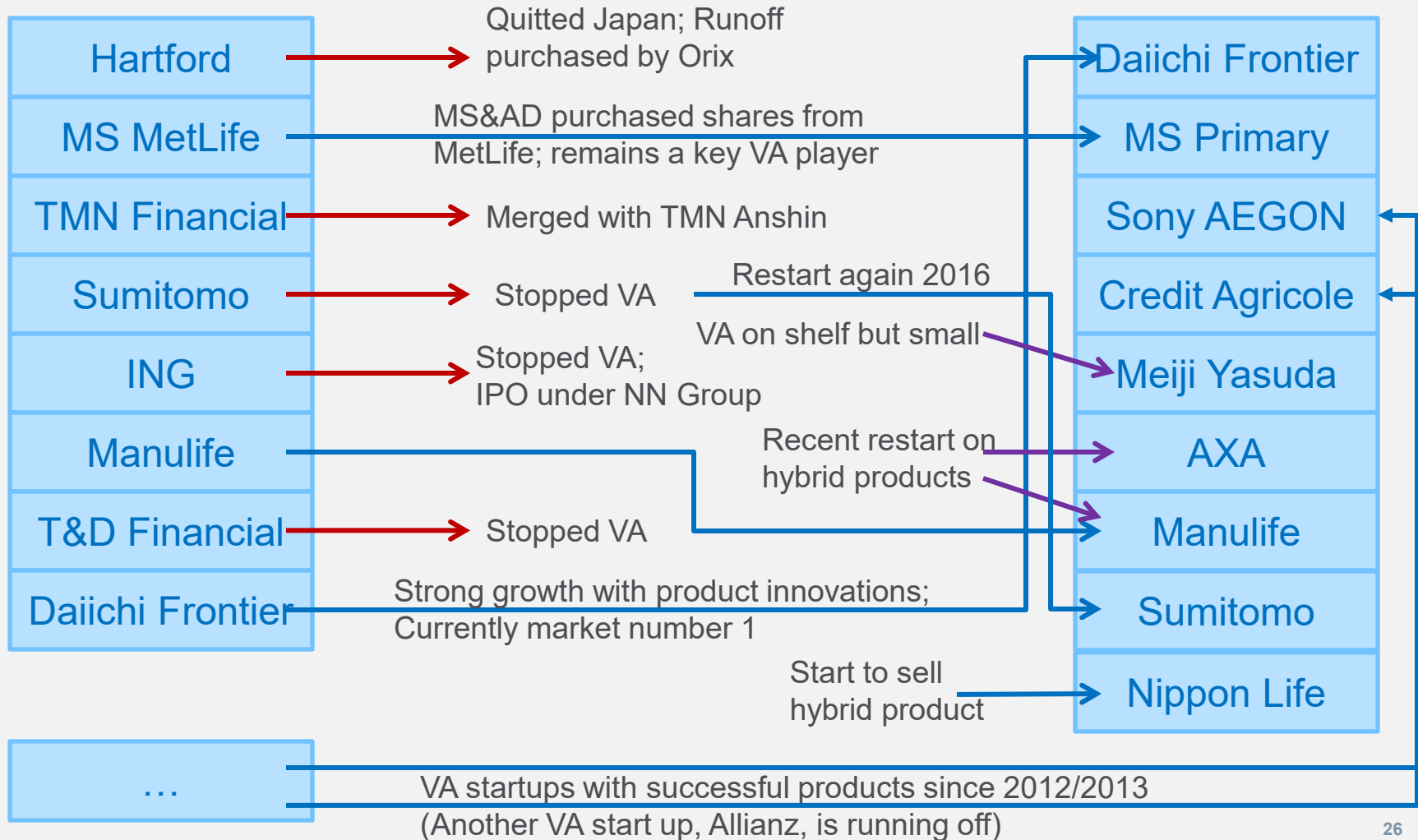


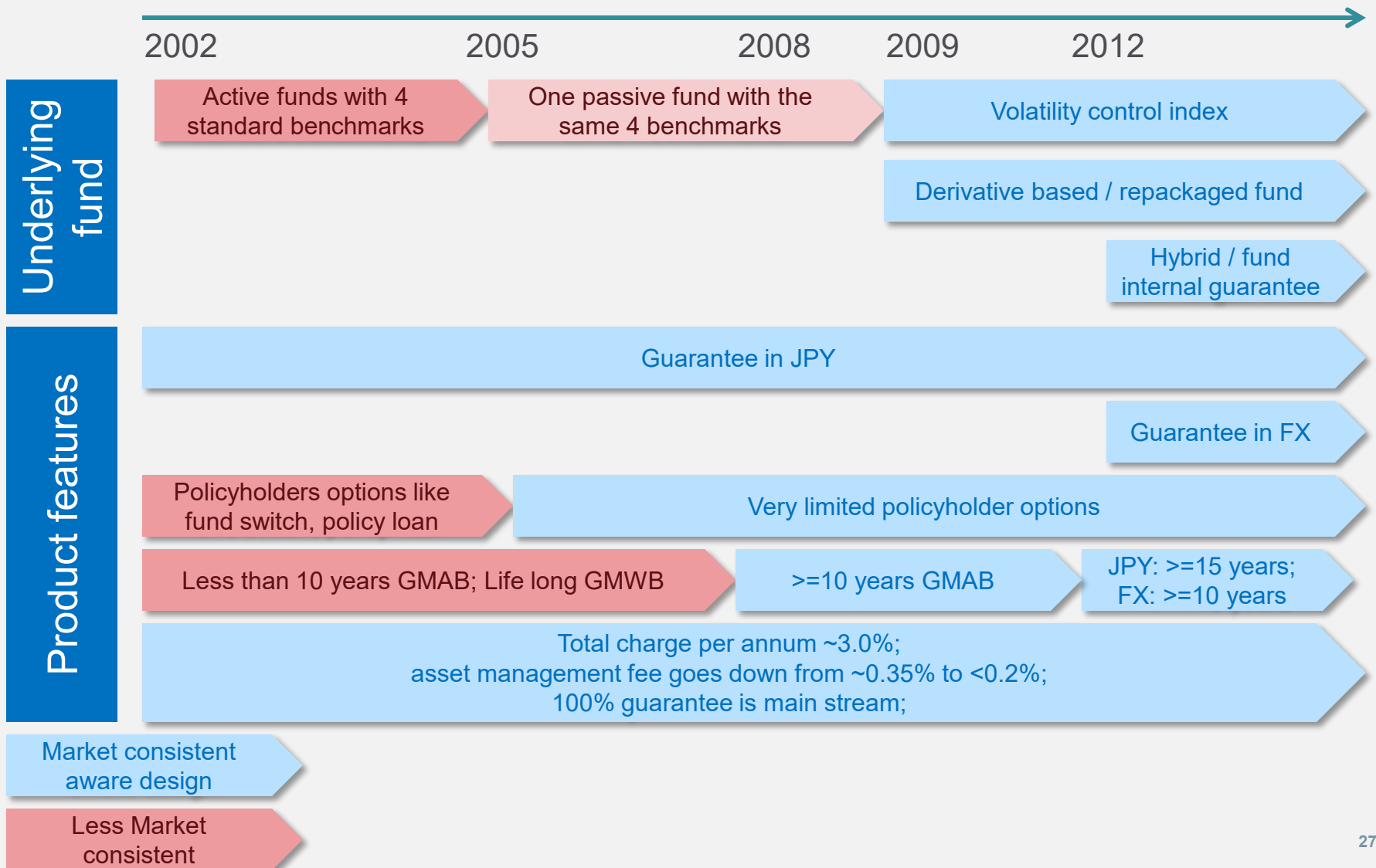
Appendix



Major players pre-2008

Major players 2016





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